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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,790	03/30/2001	Ashok N. Rudrapatna	RUDRAPATNA 12-2	4989

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EXAMINER

NGUYEN, JOSEPH D

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/821,790

Applicant(s)

RUDRAPATNA ET AL.

Examiner

Joseph D Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03/08/04.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 19-24, 25-26, and 43-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchida (6,618,596).

Regarding claim 1, Uchida discloses a method of transmitting data to a wireless mobile device (abstract, fig. 1), said method comprising:

a) determining at least one of speed, location or direction information for a mobile device (abstract, fig. 1, 4, col. 4 line 49 thru col. 4 line 40);

b) using said at least one of speed, location or direction information as a parameter to control a data rate for signal transmission from one or more base stations of a wireless system servicing said mobile device (abstract, fig. 1, 4, col. 1 line 50 thru col. 4 line 40).

Regarding claim 2, Uchida further discloses, wherein said at least one of speed, location or direction information is used to determine which one of said base stations should transmit to said mobile device (when the mobile device is handoff between base

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stations which means the handoff base station is the one that should transmit to said mobile device) (col. 3 lines 49-61).

Regarding claim 19, Uchida et al. further discloses the method of claim 1 comprising determining said speed and location information for said mobile device (abstract, fig. 1, col. 4 line 49 thru col. 4 line 40).

Regarding claim 20, Uchida et al. further discloses the method of claim 1 comprising using said speed and location information as a parameter to control said signal transmission from said one or more base stations of said wireless system servicing said mobile device (abstract, fig. 1, col. 1 line 50 thru col. 4 line 40).

Regarding claim 21, Uchida et al. further discloses the method of claim 1 comprising determining said location and direction information for said mobile device (abstract, fig. 1, col. 1 line 50 thru col. 4 line 40).

Regarding claim 22, Uchida et al. further discloses the method of claim 1 comprising using said location and direction information as a parameter to control said signal transmission from said one or more base stations of said wireless system servicing said mobile device (abstract, fig. 1, col. 1 line 50 thru col. 4 line 40).

Regarding claim 23, Uchida et al. further discloses the method of claim 1 comprising determining said speed and direction information for said mobile device (abstract, fig. 1, col. 1 line 50 thru col. 4 line 40).

Regarding claim 24, Uchida et al. further discloses the method of claim 1 comprising using said speed and direction information as a parameter to control said

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signal transmission from said one or more base stations of said wireless system servicing said mobile device (abstract, fig. 1, col. 1 line 50 thru col. 4 line 40).

Regarding claim 25, Uchida et al. discloses a method of transmitting data from a wireless mobile device to a base station (abstract, fig. 1), said method comprising:

a) determining at least one of speed, location or direction information for a mobile device (abstract, fig. 1, 4, col. 4 line 49 thru col. 4 line 40);

b) using said at least one of speed, location or direction information as a parameter to control a data rate for signal transmission from one or more base stations of a wireless system servicing said mobile device (abstract, fig. 1, 4, col. 1 line 50 thru col. 4 line 40).

Regarding claim 26, Uchida further discloses, wherein said at least one of speed, location or direction information is used to determine which one of said base stations should transmit to said mobile device (when the mobile device is handing off between base stations which means the handoff base station is the one that should transmit to said mobile device) (col. 3 lines 49-61).

Regarding claim 43, this claim is rejected for the same reason as set forth in claim 19.

Regarding claim 44, this claim is rejected for the same reason as set forth in claim 20.

Regarding claim 45, this claim is rejected for the same reason as set forth in claim 21.

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Regarding claim 46, this claim is rejected for the same reason as set forth in claim 22.

Regarding claim 47, this claim is rejected for the same reason as set forth in claim 23.

Regarding claim 48, this claim is rejected for the same reason as set forth in claim 24.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-18, and 27-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida (6,618,596) in view of Ejzak et al. (6,618,596).

Regarding claim 3, Uchida further discloses, wherein said at least one of speed, location or direction information. However, Uchida does not specifically disclose at least one of speed, location or direction information is used to determine what signal power a base station should use in its transmissions to said mobile device.

Ejzak et al. teaches at least one of speed, location or direction information (location) is used to determine what signal power a base station should use in its transmissions to said mobile device (abstract, fig. 1, col. 3 line 44 thru col. 4 line 55). Therefore, it would have been obvious to one skilled in the art at the time the invention

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was made to modify the Uchida with the teaching of Ejzak et al. location to determine the power the base station uses in its transmission to mobile station in order to provide control transmission power to meet the data rate when serving a moving mobile device.

Regarding claim 4, Ejzak et al. further discloses, wherein said transmission signal power is at least a required signal power to transmit a signal to said mobile device (abstract, fig. 1, col. 3 line 44 thru col. 4 line 55).

Regarding claim 5, Ejzak et al. further discloses, wherein said at least one of speed, location or direction information is used to control the transmission of a first base station toward which said mobile station is moving by delaying transmission of data from said first base station to said mobile device until said mobile device is located close enough to said base station such that a required signal power for transmission to said mobile device is less than or equal to a threshold signal power (col. 8 line 58 thru col. 9 line 53).

Regarding claim 6, Ejzak et al. further discloses the method claim 5 further comprising transmitting data from said first base station to said mobile device at a first data rate using said required signal power and transmitting data at a second data rate using a signal power greater than said required signal power (col. 8 line 58 thru col. 9 line 53).

Regarding claim 7, Ejzak et al. further discloses a method of claim 6 further comprising increasing a rate of data transmission from said first data rate to said second data rate when said transmission signal power is greater than said required signal power (col. 8 line 58 thru col. 11 line 3).

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Regarding claim 8, Ejzak et al. further discloses the method claim 6 further comprising transmitting data from said first base station to said mobile device at said second data rate when said mobile device is moving away from said first base station cell and toward a second base station which has allocated at least a predefined heavy load amount of its total RF signal power (abstract, fig. 5, col. 8 line 58 thru col. 10 line 64).

Regarding claim 9, Uchida further discloses a method of claim 1 further comprising controlling said base stations such that neighboring base stations use a soft handoff during a data transmission when said mobile device is in a handoff region and is entering a cell of a base station (abstract, fig. 1, col. 3 lines 49-61). However, Uchida does not specifically disclose mobile device is entering a cell of a base station having allocated not more than a predefined light load amount of the total RF signal power.

Ejzak et al. teaches mobile device is entering a cell of a base station having allocated not more than a predefined light load amount of the total RF signal power (fig. 4-16, col. 1 line 47 thru col. 2 line 67, col. 3 line 44 thru col. 4 line 57, col. 9 line 22 thru col. 11 line 45). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ejzak et al. of a base station having load amount of the RF signal power in order to control the data rate to a mobile station.

Regarding claim 10, Uchida further discloses a method of claim 1 further comprising controlling said base stations such that neighboring base stations use a soft handoff during a data transmission when said mobile device is in a handoff region

(abstract, fig. 1-3, col. 3 line 49 thru col. 4 line 29). However, Uchida does not specifically disclose a base station servicing said mobile device has allocated at least a predefined heavy load amount of its total RF signal power.

Ajzak et al. teaches a base station servicing said mobile device has allocated at least a predefined heavy load amount of its total RF signal power (fig. 4-5, col. 1 line 47 thru col. 2 line 67, col. 3 line 44 thru col. 4 line 57, col. 9 line 22 thru col. 11 line 45). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ejzak et al. of a base station has allocated at least a predefined heavy load amount of the RF signal power in order to control the data rate to a mobile station.

Regarding claim 11, Uchida further discloses a method of claim 1 further comprising controlling said base stations such that neighboring base stations use a soft handoff during a data transmission when said mobile device is in a handoff region (abstract, fig. 1-3, col. 3 line 49 thru col. 4 line 29). However Uchida does not specifically disclose a base station servicing said mobile device is more heavily loaded than a base station region to which said mobile device is moving.

Ajzak et al. teaches a base station servicing said mobile device is more heavily loaded than a base station region to which said mobile device is moving (fig. 4-5, col. 1 line 47 thru col. 2 line 67, col. 3 line 44 thru col. 4 line 57, col. 9 line 22 thru col. 11 line 45). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ejzak et al. of a base station servicing said mobile device is more heavily loaded than a base station

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region to which said mobile device is moving in order to control the data rate to a mobile station.

Regarding claim 12, Uchida further discloses a method of claim 1. However, Uchida et al. does not specifically disclose delaying transmission of data to said mobile device when it is not in the process of receiving a data transmission and when a base station assigned to transmit to said mobile device has allocated at least a predefined heavy load amount of its total RF signal power and a neighboring base station has allocated not more than a predefined light load amount of the total RF signal power.

Ajzak et al. teaches delaying transmission of data to said mobile device when it is not in the process of receiving a data transmission and when a base station assigned to transmit to said mobile device has allocated at least a predefined heavy load amount of its total RF signal power and a neighboring base station has allocated not more than a predefined light load amount of the total RF signal power (col. 7 line 47 thru col. 10 line 64). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ajzak et al. of delaying transmission of data to said mobile device in order to avoid the data lost during handoff.

Regarding claim 13, Ajzak et al. further discloses the method of claim 12 further comprising providing a transmission by a neighboring base station to said mobile device when said mobile device is in a handoff region between said base stations (col. 8 line 58 thru col. 10 line 64).

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Regarding claim 14. Uchida further discloses the method of claim 1 further comprising providing transmission of data to said mobile device by a neighboring base station when said mobile device is in a handoff region between a base station transmitting to it (fig. 1, col. 3 line 49 thru col. 4 line 40). However, Uchida does not specifically disclose neighboring base station has allocated not more than a predefined light load amount of the total RF signal power.

Ajzak et al. teaches neighboring base station has allocated not more than a predefined light load amount of the total RF signal power (fig. 1-8, col. 4 line 25 thru col. 11 line 19). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ajzak et al. of allocated load amount of the signal power in order to avoid the data lost during handoff.

Regarding claim 15, Uchida discloses the method of claim 2. However, Uchida et al. does not specifically disclose the method further comprising providing a transmission signal power greater than a required signal power from a base station to said mobile device when said mobile device is moving towards a known coverage hole.

Ajzak et al. teaches providing a transmission signal power greater than a required signal power from a base station to said mobile device when said mobile device is moving towards a known coverage hole (abstract, fig. 1, col. 4 lines 25-57, col. 8 line 18 thru col. 10 line 15). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with

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the teaching of Ajzak et al. of transmission signal power in order to avoid the data lost during handoff.

Regarding claim 16, Uchida discloses the method of claim 1. However Uchida et al. does not specifically disclose the method comprising delaying a data transmission from a base station to said mobile device when said mobile device is moving towards a known coverage hole.

Ajzak et al. teaches the method comprising delaying a data transmission from a base station to said mobile device when said mobile device is moving towards a known coverage hole (col. 7 line 47 thru col. 10 line 64). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ajzak et al. of delaying transmission of data to said mobile device in order to avoid the data lost during handoff.

Regarding claim 17, Uchida discloses the method of claim 1. However, Uchida does not specifically disclose the method further comprising delaying transmission to said mobile device when the remaining maximum delay time for transmission to said mobile device is not less than a predefined multiple of a time interval for when said base station has allocated not more than a predefined light load amount of the total RF signal power.

Ajzak et al. teaches delaying transmission to said mobile device when the remaining maximum delay time for transmission to said mobile device is not less than a predefined multiple of a time interval for when said base station has allocated not more than a predefined light load amount of the total RF signal power (col. 7 line 47 thru col.

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10 line 64). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ajzak et al. of delaying transmission of data to said mobile device in order to avoid the data lost during handoff.

Regarding claim 18, Uchida discloses the method of claim 1. However, Uchida et al. does not specifically disclose the method further comprising providing a transmission signal to said mobile device when the remaining maximum delay time for transmission to said mobile device is less than a predefined multiple of a time interval for when said base station has allocated not more than a predefined light load amount of the total RF signal power.

Ajzak et al. teaches providing a transmission signal to said mobile device when the remaining maximum delay time for transmission to said mobile device is less than a predefined multiple of a time interval for when said base station has allocated not more than a predefined light load amount of the total RF signal power (col. 7 line 47 thru col. 10 line 64). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Uchida system with the teaching of Ajzak et al. of delaying transmission of data to said mobile device in order to avoid the data lost during handoff.

Regarding claim 27, this claim is rejected for the same reason as set forth in claim 3.

Regarding claim 28, this claim is rejected for the same reason as set forth in claim 4.

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Regarding claim 29, this claim is rejected for the same reason as set forth in claim 5.

Regarding claim 30, this claim is rejected for the same reason as set forth in claim 6.

Regarding claim 31, this claim is rejected for the same reason as set forth in claim 7.

Regarding claim 32, this claim is rejected for the same reason as set forth in claim 8.

Regarding claim 33, this claim is rejected for the same reason as set forth in claim 9.

Regarding claim 34, this claim is rejected for the same reason as set forth in claim 10.

Regarding claim 35, this claim is rejected for the same reason as set forth in claim 11.

Regarding claim 36, this claim is rejected for the same reason as set forth in claim 12.

Regarding claim 37, this claim is rejected for the same reason as set forth in claim 13.

Regarding claim 38, this claim is rejected for the same reason as set forth in claim 14.

Regarding claim 39, this claim is rejected for the same reason as set forth in claim 15.

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Regarding claim 40, this claim is rejected for the same reason as set forth in claim 16.

Regarding claim 41, this claim is rejected for the same reason as set forth in claim 17.

Regarding claim 42, this claim is rejected for the same reason as set forth in claim 18.

Response to Arguments

5. Applicant's arguments with respect to claims 1-48 filed on Mar. 08, 2004 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Rudrapatna et al. reference (6,052,598) discloses a method of transmitting data comprising: velocity and direction, measuring the signal strength against threshold between mobile station and the base station of the cell in which it is located and the base stations of the neighboring cells, the time when the mobile unit will require handover to a neighboring cell, the data rate, the power levels of the mobile station at suitable intervals are measured.

7. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

Or faxed to:

703 308-9051, (for formal communication intended for entry)

Or:

(703) 305-9509 (for informal or draft communications, please label

"PROPOSED" OR "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA. sixth floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D Nguyen whose telephone number is (703) 605-1301. The examiner can normally be reached on 7:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (703) 308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Joseph Nguyen



May 7, 2004



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